NOVEMBER 1955

FIREMEN

SIXTIETH YEAR · NATIONAL FIRE PROTECTION ASSOCIATION

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FOR FIREFIGHTING OR BOOSTER SERVICE the highly portable, light-weight Marlow Fire Pump can be quickly moved to a fire or water source that a pumper can't reach. For fire-fighting, the unit boosts hydrant pressure or pumps from any pond, or shallow well. Small departments can dispatch it to dreaded second fires. For booster service the pump can be carried by two men to inaccessible water sources. The pump pushes water up hills or over long distances to supply pumpers or tank trucks.

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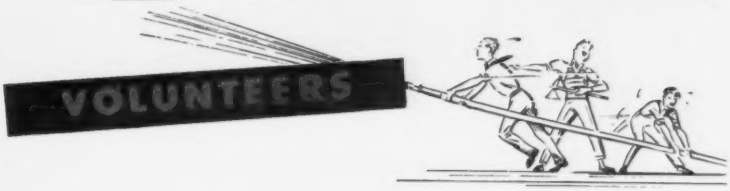

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Provide your community—your property owners and your children — with all of the advantages of a big city fire alarm system.

At a cost well within reason, you can have a municipal fire alarm box system that will immediately announce the *location* of a fire.

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TRAGEDY COMES TO LEXINGTON. This tank truck jackknifed, tipped over on its side and traveled about 100 feet in that position. Sparks showered up from beneath the truck and it blew up. The driver was killed.

Rockwood FOAM puts out tank truck fire in minutes!

Here is the true story from the pages of the Boston Globe and eye-witnesses

It was Thursday, March 17, 1955, 9:30 a.m. A tank truck was stopping at a traffic light on the Concord Turnpike in Lexington, Massachusetts. Suddenly, it jackknifed. There was a puff of smoke, then an explosion. The driver was hurled onto the roadway. His clothes were aflame and he collapsed. Onlookers said flames reached 200 feet in the air.

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Soon Engine 1, equipped with a 1½" Rockwood FOAM eductor plus the new type SG-60 FOAM nozzle with adapter for straight stream and FogFOAM, was at the scene. *With this Rockwood equipment and FOAM, Engine 1 had the fire completely under control in fifteen minutes; completely extinguished in forty-five minutes.*

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Engineers Water . . . to Cut Fire Losses

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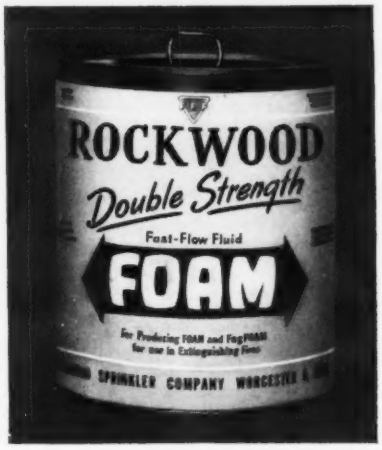

ROCKWOOD DOUBLE-STRENGTH FOAM LIQUID, 3 parts mixed with 97 parts water, forms a solid FOAM blanket that quickly re-seals itself. Available in 5 gallon drums.

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Please send me your illustrated booklet on Rockwood fire fighting products.

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Company.....
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City.....*Zone*....*State*.....

Pictured left to right — Edward A. Fitzgerald, Mayor; John J. Givney, Commissioner; Lawrence J. Collins, Controller; Carl A. Smith, Chief; Gus G. Jacobs, Ward LaFrance upstate New York representative.

5 new WARD LaFRANCE trucks guard Troy, N. Y.

In Troy, steep hills call for powerful engines to move apparatus speedily to fires. In addition, large factories in Troy's industrial section require dependable, high pressure extinguishing systems in case of a conflagration. These are just two of the many reasons why Troy city officials selected four Ward LaFrance 1000 GPM pumpers and one squad and rescue truck with lights and booster equipment.

There is a Ward LaFrance truck that will meet your community's requirements. Ask to have the representative in your area tell you about the many advantages of Ward LaFrance fire engineered equipment.

"These Ward LaFrance trucks were purchased for protecting our city because they are specially designed for fire fighting from the ground up. They have ample pumping capacities, plenty of power for climbing the steep hills of Troy and we know that they will stand up if called upon for heavy duty in our industrial area."

Carl A. Smith

Carl A. Smith
City of Troy, Bureau of Fire

Upstate New York Agent:
Gus G. Jacobs, District Manager
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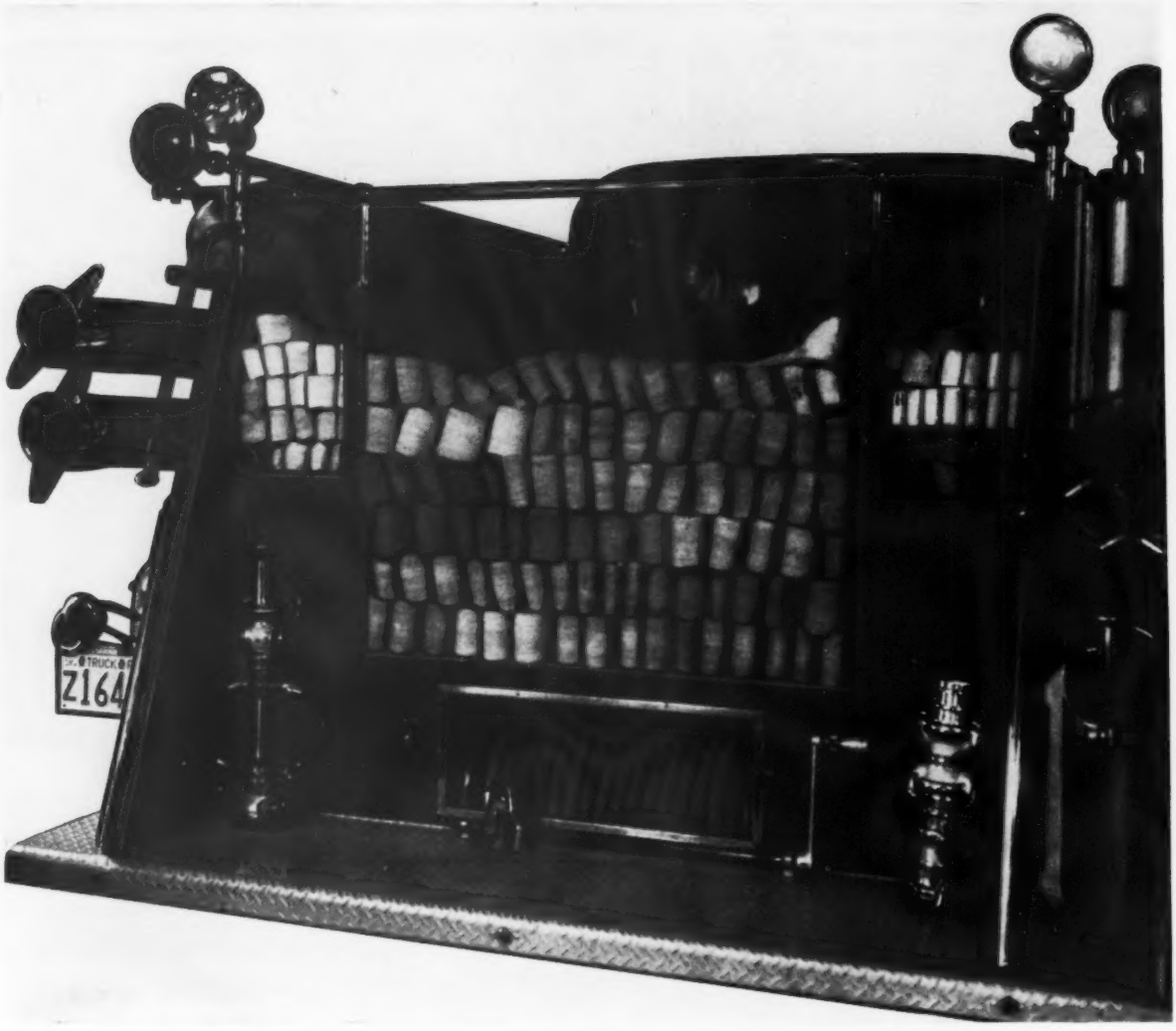

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The lightweight and flexibility of this remarkable hose make it very easy to handle; saves the energy of the firemen for the hazard and hard work at the fire.

Non-porous rubber tube with jackets of highest grade cotton warp thread, combined with filler thread of super-strong, quick-drying Dacron, gives this hose its remarkable qualities.

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We also manufacture a complete line of water and chemical fire hose for every municipal and industrial need. *Write for free folder and name of nearest distributor.*

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DO YOU GET THIS KIND OF FOAM

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This photomicrograph is the revealing secret of **NICEROL** *AIR FOAM'S TRULY AMAZING heat stability*

THIS IS WHY *NICEROL*

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LARGE CAPACITY HOSE BODY

Hose body is heavy gauge cold drawn steel with capacity for 1900 feet 2-1/2 inch, plus 400 feet 1-1/2 inch hose with 300 gallon water tank, or 1500 feet of 2-1/2 inch plus 400 feet of 1-1/2 inch hose with 500 gallon water tank.

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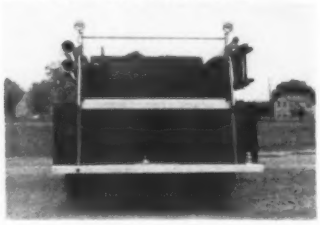
Water tanks available in 300 gal., 500 gal., 750 gal., or 1000 gal. capacity on specification. New design removable top. A large outlet sump to make entire tank capacity available for fire fighting. Large fill opening and non-spill venting. Better load distribution on chassis for greater operating stability.

REAR COMPARTMENTS



Three rear compartments are provided, one open and two enclosed. The enclosed compartments will house a portable pump or generator.

LARGE SIDE COMPARTMENTS

Four large compartments, two each side of body are amply large to house inhalators and fresh air masks. Compartments are optional at small cost.

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Firemen

Volume 22 — Number 11

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NATIONAL FIRE PROTECTION ASSOCIATION

A VOLUNTARY NON-PROFIT ORGANIZATION
60 BATTERYMARCH ST., BOSTON 10, MASS.

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Muscular Dystrophy

Again this year fire fighters throughout the United States are lending their efforts to supporting the campaign to raise funds for muscular dystrophy research. The International Association of Fire Fighters, many fire departments in major municipalities, and thousands of volunteer fire companies have pledged their efforts for this national campaign. Last year the activities of the fire service toward this goal resulted in the collection of more than $3,900,000. This November, in the week including Thanksgiving, the fund raising campaign will again be in full operation.

The response of the public to such a campaign is not only an indication of the worthiness of the cause, but also a measurement of the respect which the public has for the fire fighter. It is also an indication that, even in a fund raising campaign, visits by fire fighters to homes in the community which their department protects, are appreciated.

Cover Picture

Members of the Woodland, California, Fire Department are shown in action on this month's cover. (Woodland *Democrat* photo). Early on the morning of September 15, an explosion occurred in a 1-story brick, wood-framed supermarket and fire spread through the 8,000 sq. ft. building. Alarms brought two pumpers, a squad truck, an aerial ladder and an OCD pumper from the Woodland Fire Department, which is headed by Chief Everett Runkle. Off duty personnel were recalled and mutual aid assistance was requested from the nearby Davis Fire Department. Despite quick ventilation of the wood shingled roof by fire fighters contents and the interior of the supermarket received fire damage estimated at more than $250,000.

Readers interested in some analyses of fire causes and fire protection weaknesses of supermarkets are referred to the reprint from FIREMEN, F17-1, titled "Supermarkets and Suburban Shopping Centers" (25 cents); and to the 8-page occupancy fire record FR54-2, (50 cents). Both may be obtained from the NFPA Publications Department, 60 Batterymarch Street, Boston 10, Massachusetts.

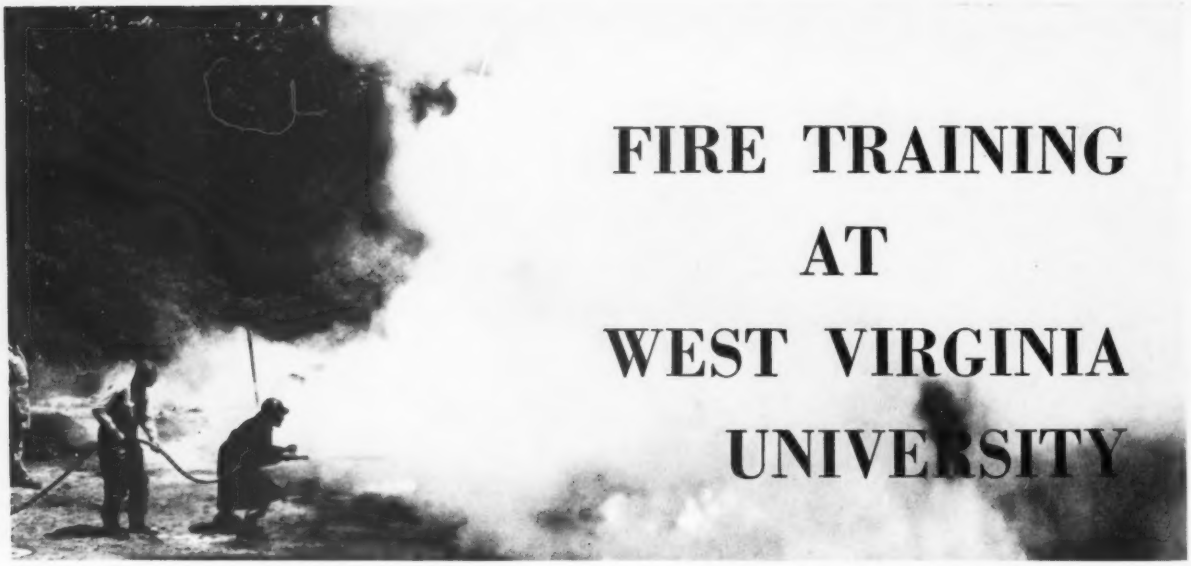
Whose Job?

Once in a while we hear some old-fashioned smoke-eater objecting to making fire prevention inspections on the ground that "I was hired to put fires out not to prevent them." Such persons could be brushed off as "relics of the paleolithic age" but for the damage they unwittingly do to the fire service. Inspections by fire department members are not new. The Salt Lake City Fire Department has records of such inspections made in 1897.

What is new is that the fire company is no longer tied to the fire house. Radio communication allows the company to carry on inspections and drills in their normal first-due district and remain available for fire calls. Now, instead of sending out only one officer or man, the entire company can get the benefit of on-the-scene inspections and there are more eyes to spot fire hazards which may endanger life safety.

A very important factor often overlooked is that on-the-air inspections and training programs deal a crushing blow to the advocates of combined police and fire departments. The average fire department does not have enough working fires to convince the taxpayer that the fire fighters are reallly busy, if they only come out of the station on alarms. But if the department has a good continuous training and inspection program, it will be obvious to the public that such a fire department is working in the public interest. The average citizen would much prefer to go to bed knowing that the fire fighters have checked his home and told him how to eliminate fire hazards, than to be taken down a ladder at 4 A.M. in freezing weather.

Aside from this, there is the irrefutable fact that when a fire breaks out the average loss will be in the hundreds of dollars, no matter how fast and efficient the department may be. And, there is always the danger of fire casualties. A fire department needs manpower to fight the major fires. It is much easier to justify the need for more help when everyone is busy than when the fire station is looked upon by the voter as a "rest home."



FIRE TRAINING AT WEST VIRGINIA UNIVERSITY

Another in a series of articles describing state fire training facilities. There are more than 200 paid, call and volunteer fire departments in the State of West Virginia, many of whom are now receiving up-to-date instruction in classes held at this new research and training center in Morgantown. (*Based upon a report by R. E. Hanna, Jr.*)

AMONG the modern fire training centers in the United States is the Fire Protection Research and Training Center on the campus of West Virginia University in Morgantown. Completion of the facilities in 1953 marked a high point in firemen's training for that state. Today, training classes are available to paid and volunteer fire fighters and the state training program, conducted by Supervisor R. E. Hanna, Jr., provides diversified instruction for thousands of fire fighters.

As shown on these pages, the fire protection center consists of four main units located on a 2-acre site, two miles north of Morgantown. Main structures are a test building, a control building, a basement training unit and a drill tower.

The test building is a 2-story structure, approximately 26 by 35 feet in size, framed of 12-inch reinforced concrete beams and columns. Two-thirds of the east wall and the west and north walls are constructed of expanded slag aggregate blocks; the remainder of the east wall and the south wall are made of "transite" siding, which serves as a safety measure to assure proper venting in case of an explosion. The floors and roof are of reinforced concrete. The interior is plastered with one inch of "vermiculite" plaster, and the entire structure is designed to withstand a temperature of 2400° Fahrenheit.

Front view of the 20 by 30-ft. basement or cellar unit where fire fighters may receive practical training in handling confined fires. In planning construction for the training center, the committee gave practical consideration to the need for allowing plenty of space between buildings so that training classes would not interfere with each other.

All window openings are provided with 4-part fire shutters, which have angle iron frames hinged at the sides, the panels being filled with vermiculite concrete reinforced with hardware cloth.

The interior of the test building is subdivided by permanent "curtain" walls, and various openings from first to second floor and roof are provided so that any desired arrangement of space volume and draft may be effected.

Scuppers are provided for each section of each floor and are connected by gravity drains to a detached collection tank, where run-off may be collected and measured.

Twenty-five openings at various locations and heights in both exterior and curtain walls permit the insertion of thermocouples, which can be plugged into either of two exterior junction boxes.

The control building is a 1-story L-shaped structure constructed of expanded slag block to match the test building. It measures 42 feet along the base and 68 feet on the long leg of the L and contains a 16 by 16 ft. storage room; a 24 by 16 ft. control room, a 16 by 16 ft. office, a 20 by 16 ft. classroom and lavatory and shower facilities.

General view of fire training facilities in Morgantown, West Virginia. Four-story drill tower is at left. Test building for conducting actual fires is in the center, while at right is the control room where observers may coordinate fire training.

View of a fire being conducted in the test building. Subdivision by curtain walls and openings from the first floor to the roof, permits creation of a variety of interior fire conditions. Thermocouples record temperature changes, while a collection tank allows measurement of water used to control fires in this building.

Panel board in the control room. Potentiometers measure changes in voltage potentials caused by fire in various parts of the test building. Temperature readings are permanently recorded at five second maximum intervals.

Installed in the control room are two 8-point recording potentiometers, connected by permanent underground wiring to junction boxes adjacent to the test building. Provision on the same panel has been made for future installation of two additional potentiometers. Temperature readings are permanently recorded on a strip chart with five second maximum intervals between readings.

The 20 by 30 ft. basement or cellar unit was constructed separately from the test building for safety reasons and is built of similar materials.

The 4-story drill tower had been a part of the training facilities for many years at another location and was moved to the present site in 1951 to centralize all physical facilities at one location.

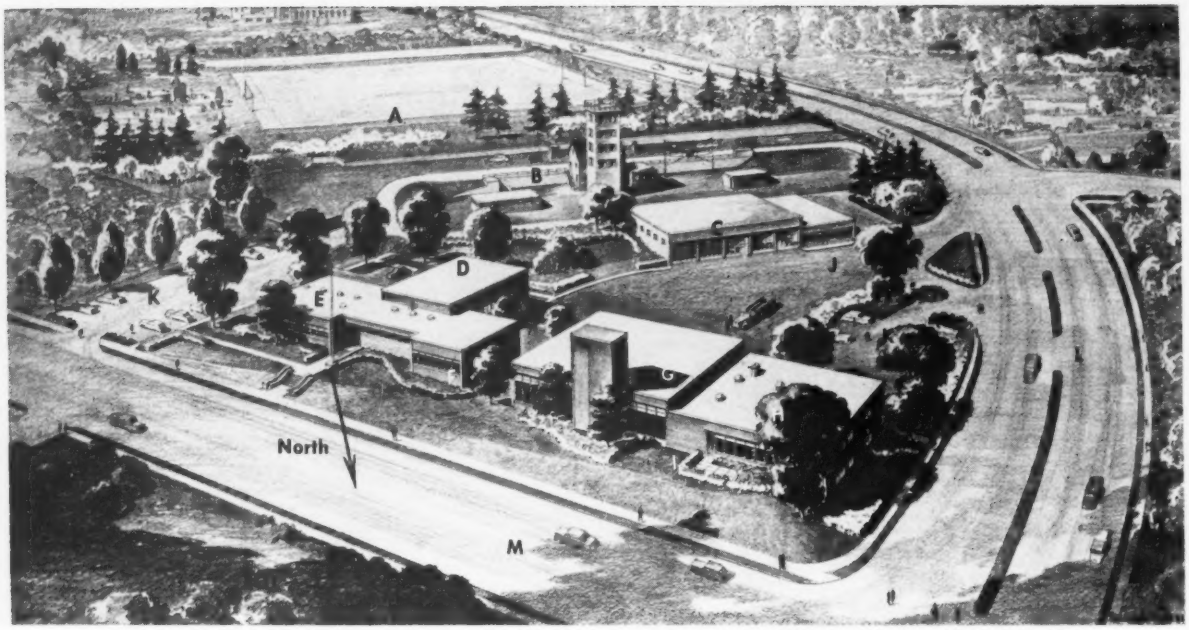
There is also a reinforced concrete cistern, which will hold in excess of 10,000 gallons of water.

THIS training center has now been in use for several years. Thus far no serious defects of design or construction have been detected.

When it was originally planned, a committee was appointed by the State Fire Marshal, who selected representatives of agencies and groups interested in fire service training throughout West Virginia. Committee members made visits to several other fire schools and consulted with fire service authorities to obtain the best available information for building a fire training center which would incorporate maximum utility and safety features.

State-wide fire service training in West Virginia is conducted by the Industrial Extension Department of the School of Mines of West Virginia University, with the cooperation of the State Fire Marshal, the West Virginia Inspection Bureau and the Division of Vocational Education of the State Department of Education.

Last year (1954), 205 fire fighters from 47 municipal departments and 21 industrial and institutional fire brigades attended the 24th Annual State Fire School. A total of 117 fire fighters completed the various courses in instructor training, fire department administration, fire prevention, industrial fire protection and basic firemanship. In addition, a fire service extension course of 58 hours was completed by 32 fire departments and 403 fire fighters throughout the state.



Artist's Conception of Baltimore County's Fire Department Facilities

(A) Pumping Pits (B) Training Area (C) Repair Shop (D) Auditorium (E) Headquarters (F) Fire Alarm Communications (G) Fire Station Engine Room (H) Living Quarters (I) Civil Defense Headquarters in Basement (J) Entrance to Training Grounds (K) Parking Facilities (L) Bosley Avenue (M) York Road.

Baltimore County's Training Center

IN OCTOBER 1954, FIREMEN magazine described the diverse training facilities which were to be made available for fire fighters in Baltimore County, Maryland. This excellent fire training site was dedicated on June 18, 1955, and is now in full operation under the direction of Chief A. P. Orban, of the Baltimore County Fire Department. The training area will serve 15 fully paid and 27 volunteer fire companies in Baltimore County.

The new headquarters is about one-quarter of a mile north of Towson, and houses administration offices, a fire station, a repair shop, the Fire Prevention Bureau, civil defense headquarters for Baltimore County, a training auditorium with capacity for 300 persons, and the central fire alarm headquarters.

A few of the training facilities on the 2-acre site are shown on the opposite page. There is a 6-story training tower, a 2-story attic, basement and smokehouse for fighting test fires and for training in ventilation, a building for gas mask training, drafting pits for pump operators, flammable liquid installations, high voltage electrical installations, and a driver training course. The headquarters station of the Baltimore County Fire Department has four entrances and floor space for two pumpers, an aerial ladder truck, an ambulance and two pieces of reserve apparatus. Dormitories include living space for 22 men, a guest room, recreation room, lockers, kitchen facilities, and a "turnout" dressing room between the living quarters and the engine room.

Of prime importance to the operation of the fire department and the training center is the modern repair shop which features five entrances and a modern paint-room installation capable of handling an aerial ladder truck. The shop also includes hydraulic equipment, facilities for hose and ladder repair, a stockroom, washroom, and an office for the shop superintendent.

(*Left*) Action at the Baltimore County Fire Training Center. Fire fighters are about to extinguish a flammable liquid fire in an area where a pipeline has burst. Drill tower is at extreme right. Smaller building is the smokehouse. Car in foreground is used for training in automobile fires. The Baltimore County Fire Department has an agreement with a local "junk yard" whereby automobiles are delivered for training fires and after they are burned are replaced by other cars.

(*Right*) Another view of the training grounds. Building in left foreground is used for gas mask training. Six-story drill tower is approximately 18 by 18 ft. square and features numerous fire doors and shutters, fire escapes, standpipe with valve and hose connections on each floor, and a training net for practice in jumping. At right is the smokehouse which is a 2-story attic and basement fire-resistant building with a 4-room annex attached. Actual fires may be built in this structure. Small building on upper level, at extreme right, houses pumping equipment which supplies flammable liquids to various training areas.

GOOD use is made of radio communications for combining activities of the Baltimore County Fire Department and the volunteer fire companies. All box and telephone alarms from the entire county are channeled through a new central alarm headquarters. Both paid and volunteer fire companies are dispatched by telephone and radio but operate independently until arrival of the fireground where all companies are under the command of the paid officer in charge.

The central alarm control room has separate facilities for radio and telephone operators. At present, two men are on duty at all times, with personnel working 8-hour shifts. Recordings are made of all radio transmissions and all emergency telephone calls. The control room features a unique mapping system where all street intersections are indexed on a rotary recorder—together with all apparatus assignments up to third alarms. Approximately 15,000 locations in the county are classified on 35 mm. microfilm, which can be projected quickly on a 24 by 36 in. screen.

The radio system features a 250 watt transmitter-receiver unit with a remote controlled console. All equipment is duplicated with 3000-watt standby electric generators at both operating and transmitter ends of the line. Twenty-five sirens at volunteer fire stations are selectively controlled by push button radio operation and 109 mobile 60 watt transmitter-receiver units are operated in both the paid and volunteer fire services.

The box alarm system covers the metropolitan area of Baltimore county with two sub-centers in other sections of the county. These three alarm districts retransmit alarms into central headquarters. Each subcenter has four box circuits but the new control office has provision for expanding the box alarm system to fifty circuits.

The transmitter for the radio system is located on top of the Towson Water Tank and has an overall height of 152 feet. This is one of the highest points in the county and provides adequate radio reception throughout the area. The transmitting building is directly beneath the water tower and features two 250 watt transmitters, alternating in operation every 24 hours, with one transmitter serving as a "standby." The "standby" generator is of 3000 watt capacity. This building is equipped with an automatic forced air ventilating system and is completely covered by a carbon dioxide extinguishing system.

At the present time, the paid fire department has forty-seven 60 watt two-way mobile units while fifty-one pieces of apparatus in the volunteer fire department companies are also equipped with these two-way radio units. Ambulances in the paid and volunteer fire services also operate under radio control headquarters.

The telephone switchboard in the control room is connected by trunk lines to all telephone exchanges in the County so that fire alarms may be transmitted quickly. All fire reports pertaining to paid company response are relayed to the particular station by telephone extension lines. All fire reports requiring volunteer fire company response are transmitted through two-way radio.

The alarm and communications area in the Administration building is air-conditioned. Fire department personnel include a battalion chief in charge, a fire captain, 9 dispatchers having the rank of lieutenant, three linemen of the same rank, two linemen who are privates in the Department, and a lieutenant in charge of radio repair. The office of the Superintendent of Fire Alarm is adjacent to the communications room.

(*Right*) Deputy Chiefs F. Lee Cockey (*left*) and Winfield H. Wineholt, chief instructor, examine a 500 gpm fog nozzle in the storage building. Note the variety of fire training equipment available to the men who receive instruction at this training center.

(*Left*) Helicopter spills hose from dispensing tray in test flight at Arcadia Equipment Development Center. This is one of the projects assigned to the Center as part of the "Operation Firestop" program, which was financed by an appropriation through the Federal Civil Defense Administration, and was intended primarily to develop new techniques and equipment for handling large-scale brush or forest fires.

HOSE DISPENSING TRAY FOR HELICOPTERS

TO SPEED the movement of hose lines and other equipment in forest fire fighting, the Forest Service, of the United States Department of Agriculture is experimenting with the practical use of helicopters. Some of the results of these experiments were demonstrated last year during "Operation Firestop," conducted at Camp Pendleton, California, and reported in the October, 1954, issue of FIREMEN magazine. (*For an extensive study of general fire research now being conducted by various laboratories and organizations, see the article by NFPA Chief Engineer Horatio Bond, published in the October, 1955, issue of the NFPA* Quarterly — *Ed.*)

Since then the Arcadia Equipment Development Center, Arcadia, California, has been continuing research studies on the use of helicopters. One aspect of that research is contained in "Equipment Development Report No. 37," issued in June, 1955, which describes the development of a fire hose tray to be carried on helicopters when a situation demands quick laying of hose lines through forest or brush area.

A Bell Model 47D helicopter was chosen for tests. Studies had indicated that approximately 1,000 ft. of 1½-in. cotton jacket rubber-lined hose of the dacron filler type could be carried by the craft. Hose pickups from the ground were successful, but as the helicopter stretched larger quantities of the line the load became increasingly greater. Side mounted reels or undermounted baskets posed problems of weight displacement, ground clearance and braking of reels.

On the other hand, a hose tray afforded simplicity of operation, ease of dropping the tray when it was no longer needed, and ground clearance when the helicopter was landed or in motion. The tray which resulted from these studies is shown on the opposite page.

The tray designed for the tests measured approximately 4 by 8 ft. and was constructed of ½ and ⅝-in. diameter steel tubing, with a sheet of ¼-in. plywood used for the carrying surface. Aluminum runners were attached to the bottom to permit sliding of the tray on the ground.

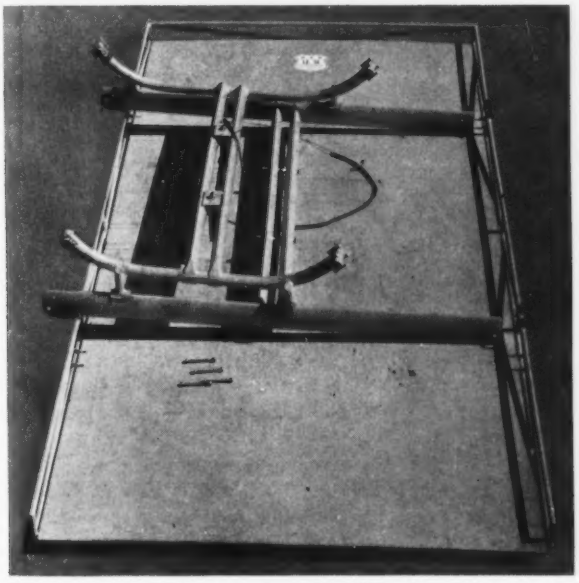
A "bomb release" mechanism was bolted to the helicopter frame, then a special "H-structure" was engaged in the bomb release and the hose tray bolted to this device. By these mechanisms the tray assembly may be dropped when the pilot trips the bomb release, or it may be removed on the ground by unbolting. Approximately 900 ft. of 1½-in. hose was accordioned into the tray so that the weight was distributed uniformly. Forward loops of the hose were tied with linen thread which had a breaking strength of about 21 pounds, so that the entire load would not be pulled out at once when the helicopter gained forward speed.

In tests which followed, a man stood on the ground holding one end of the hose, while the helicopter flew from that site at an altitude of 10 to 25 feet. After 100 to 200 ft. of the hose was spilled from the tray the weight of the line was sufficient to pull the remaining hose from the tray quickly, easily and effectively.

When the helicopter moved at forward speed of more than 20 mph the pilot noticed a slight dragging effect caused by the loaded tray. Otherwise maneuverability of the craft was not seriously impaired. The total tray structure weighed about 89 pounds and was built at a cost of $160.

Further information and copies of the 8-page, 8½ by 11 in., illustrated report may be obtained by writing to the Arcadia Equipment Development Center, Arcadia, California.

Metal hose tray used for dispensing hose while helicopter is in flight. "H-structure" is bolted to tray and also fastened to special "bomb release" mechanism.



Bomb release mechanism placed on H-structure. Note bolts in foreground. When helicopter is on ground, tray can be removed quickly simply by unbolting. Tripping of bomb release drops tray when helicopter is in flight.

Tray with full accordion load of 1½-in. CJRL dacron filler hose. One end of tray is open to facilitate movement of hose as helicopter flies to its destination.

Helicopter on ground with loaded tray.

Preplanning Pays Off

AS REPORTED in the December, 1954, issue of FIREMEN magazine, St. Elizabeth's Mercy Hospital in Hutchinson, Kansas, for some time has practiced regular fire and evacuation drills and has given considerable attention to preplanning for fire. The fire safety plan, developed with the assistance of Chief H. R. Dimond of the Hutchinson Fire Department, was mimeographed and given to all employees for study.

According to the September 1955 issue of "Hospital Progress" the first time the fire signal was given happened to be for an actual fire and the preplanned fire drill was carried out smoothly and successfully. Subsequent practice drills also were well received by the patients and medical personnel in the hospital.

On May 6, 1955, a serious fire occurred in the roof of the 4-story structure. Once again the fire safety plan was put into practical operation and an immediate alarm brought fire department response of an aerial ladder and four pumpers, resulting in quick extinguishment. Patients were removed quietly to lower floors within approximately ten minutes. Surgery was in progress when the fire occurred, but since the fire safety plan stressed notification of surgery personnel, the operating room staff was notified that they were in no danger and the surgery proceeded normally.

The hospital, headed by Administrator Sister M. Roberta, R.S.M., received considerable editorial attention from newspapers and letters of appreciation from business men and the chief of police in Hutchinson.

NFPA No. FR-54-25

HOSPITAL FIRE SAFETY

3rd edition (1954)

$2.50 per copy

Contains a thorough analysis of fire safety in hospitals. Describes proper preplanning, analyzes fire experience and suggests building exits code requirements and other technical recommendations.

Write to

NATIONAL FIRE PROTECTION ASSOCIATION

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HOLDING THE LINE!

ONE of the worst offenses a fire fighter can commit is to desert his position and leave a fellow fire fighter holding a charged, heavy line with the nozzle open. It is accepted that one man standing cannot safely control a 2½-in. line when 50 pounds pressure or more is at the nozzle, unless the line is secured in some way. (See emergency evolution in "Handling Hose and Ladders", available from NFPA at $2.50 per copy.) If his partner lets go of the line suddenly, the nozzle may whip free, perhaps causing severe injury or even death to the nozzle man.

This fact should be stressed continually in fire department training sessions. It is mandatory that "rookies" in paid fire departments, and volunteer fire fighters as well, be convinced of the need for holding position until the pipe is shut down.

The sketch on this page was drawn from a photo of an actual fireground incident in a large municipality. In the photo it appears that the line at right was being shut down and perhaps could have been controlled by one man. However, the line at left, where the nozzle man has been deserted, appeared fully charged and it is debatable whether the nozzle could be closed before the line slipped out of control.

In fairness it should be said that the NFPA has few photographs of such instances and it may be assumed that they are exceptional occurrences. Fire fighters throughout the nation have a natural pride in their courage and ability. Good training programs supplement that pride with the "reasons why" for each action on the fireground. Hence, most fire fighters develop a pattern of correct actions despite the risk or exertion involved in a particular fire incident. When fire fighters do not react quickly and correctly to a dangerous situation, perhaps the major portion of blame should be directed to the training program or the instructor in that department.

In this sketched incident, the dangerous situation confronting the men on the lines is the falling wall. The threat of heavy bricks hurtling towards them is sufficient to cause some of the men to turn their backs on the scene and run, but the nozzle men may not have that opportunity. Here's where the importance of good training is apparent.

Fire fighters in position with a heavy line usually can judge their safety in relation to the structure where they are directing the stream. In this instance the men were about 60 to 80 feet from the building wall. Usually, when a building is heavily involved, there is enough evidence for a fire officer to determine what portions of the structure are nearing collapse, and he can warn his men. Hose lines can be moved accordingly to allow safe departure from the position when the lines are shut down.

However, when a wall falls unexpectedly it requires a great deal of courage and some well-trained reactions for fire fighters to act correctly. Only a few seconds are available for a man to move from the dangerous area. If he turns and runs blindly he may run into the path of falling objects and become a fatality. If, however, he moves quickly but still watches the wall or the falling objects, he may preserve for himself a split-second of time which will allow him to avoid any object about to hit him.

Training sessions, therefore, should develop in each fire fighter, the habit of thinking ahead of a given situation. From the time the bell hits until return to quarters fire fighters should be evaluating every situation they encounter, should be considering their own safety and the safety of their fellow fire fighters, and should be continually aware of the possible hazards of their surroundings and what change of position will afford the safest protection. Men who operate charged lines not only must follow their department's methods of handling hose and operating nozzles properly, but also should be aware of the vulnerability of the nozzle man. In a dangerous situation he is likely to be the last person who is able to move to safety. His partner or partners can give him the greatest protection by helping him with the line until the nozzle is closed safely. To deny him this protection in a moment of crisis is a violation of one of the most important precepts of the fire fighting service.

(*Left*) Four fire fighters died in St. Louis, Missouri, when this pumper collided with a commercial truck. Driver of the latter vehicle was injured slightly. (*Wide World Photo.*)

(*Below*) Collision scene in New York City which resulted in the death of two fire fighters and injury to three others. The Fire Department is currently conducting a special campaign of public education to minimize such accidents. (*Wide World Photo.*)

. . . "every other driver is CRAZY!"

SOME years ago a truck driver was given an award for having driven for a number of years on the nation's highways without being involved in an accident. When asked how he had achieved such a record he made the statement, "I just figure that every other driver is crazy."

Drivers of fire apparatus will probably support that statement. A number of municipalities have recently experienced traffic accidents in which fire fighters were killed or injured. Two of these incidents are pictured on this page.

On September 19, four fire fighters of the St. Louis, Missouri, Fire Department were killed when a pumper collided with a commercial tractor-trailer. The accident occurred while the fire company was "covering" and resulted in the worst single traffic toll in the history of the Fire Department. And on October 5, in New York City, one fireman was killed and four others injured when a commercial truck collided with a pumper. One of the injured fire fighters died a day or so later. This traffic accident prompted Fire Commissioner Edward F. Cavanagh, Jr., to increase the special "summons" squads which he activated July 1 to cope with traffic violations which were endangering the movement of fire apparatus through the city. (See FIREMEN for August, 1955.) Members of these squads are designated for each fire station and when apparatus is responding to alarms they are prepared to issue summonses to motorists who fail to pull to the curb when fire apparatus is approaching. (The first fireman killed in the above accident was on such a "light duty" assignment.)

Safe movement of apparatus is primarily dependent upon the alertness and skill of the driver and the judgment of the officer riding in the cab. There are many motorists "crazy" enough to disregard the sound of sirens and who actually demand the right-of-way at an intersection. Others are "crazy" enough to drive with the car windows closed and radios operating loud enough to smother the sound of sirens. Others miss the sound because of wind direction or traffic noises.

It is questionable, therefore, whether fire apparatus drivers can place too much reliance on how the sound of a siren will affect or motivate other drivers in the vicinity. Many fire departments attempt to minimize the possibility of accidents by establishing, through governor control, a 35 mph top speed for response to any emergency. Some fire chiefs have ordered apparatus to be slowed to a near stop at intersections. A few municipalities have installed controlled traffic lights which will flash right-of-way signals for fire apparatus only until intersections are cleared. (See FIREMEN for July, 1955.)

But perhaps it will be most effective if all drivers of fire apparatus consider every other driver on the road as being "crazy," and proceed to and from fire alarm locations accordingly.

WATERFRONT BATTLE

Jersey City Pier fire brings full waterfront assignment but fire stays beyond reach of heavy streams to cause more than a million-dollar fire loss.

A few of the fire boats and other craft which responded to aid the Jersey City Fire Department in this pier fire. Lack of draft stops, fire walls and access holes for nozzles, permitted the fire to spread rapidly out of control. (*Wide World Photo.*)

FIRE fighters in Jersey City, N. J., faced tough problems on September 14, when a steamship pier was destroyed by fire, with loss amounting to $1,250,000. The blaze started beneath the pier deck and, since there were no sprinklers, nor deck openings through which cellar nozzles could be directed, it spread rapidly through the superstructure.

The fire was discovered in its early stages and the first alarm was sent to the Jersey City fire alarm headquarters at 3:22 P.M. Initial response included three engines and two ladder companies, a salvage unit, a battalion chief and an acting deputy chief. Because of the waterfront location, the acting chief of the department, Battalion Chief John F. Kelley, also responded to this first alarm.

Engine companies drove onto the pier and pumpers took suction from the adjacent river. Hand lines were also operated from the pumpers and from the standpipe system stations on the pier. However, fire spread so rapidly beneath the pier floor that the three engine companies had to retreat. The growing intensity of smoke caused fire fighters to don masks before they could drive the apparatus from the structure.

Seven minutes after the first alarm, a second alarm was transmitted, followed by a third alarm at 3:40 P.M. Each of these responses included one ladder truck and three pumpers. The recall of off-shift members of the department was also started when the third alarm was received.

The pier deck was covered by this unsprinklered 1-story steel-framed metalclad superstructure. (*United Press Photo.*)

Special waterfront mutual aid response was also requested by Jersey City fire officials. This brought two fire boats from New York City, two from the U. S. Army, ten from the U. S. Coast Guard, eight specially-equipped craft from the Pennsylvania Railroad, and a number of tugboats.

Despite the heavy streams in use, water could not be directed effectively into the involved timbers and the fire spread through the entire pier substructure and superstructure. Good use was made of mounted and portable turret nozzles and numerous hand lines to create a water curtain to protect close exposures, one of which was the freighter *Fort Reliance*. A special call also brought two more engine companies, three turret wagons and a water tower. After seven hours of fire fighting, control was established but it was not until noontime of the following day that first alarm companies were released.

Readers of FIREMEN who are interested in practical recommendations for construction and fire protection of piers and wharves, should consult NFPA Standard No. 87, available as a separate pamphlet for 35 cents, or in Volume VI of the National Fire Codes, titled "Transportation," priced at $6 per copy. This standard is divided into two general sections: one suggesting protection and construction of pier substructures, and the other presenting recommendations for pier superstructures.

Fire resistive, noncombustible and combustible structures each require special protection against fire and No. 87 details the practical suggestions of the NFPA Committee on Piers and Wharves. Complete automatic sprinkler systems are recommended for all combustible substructures. It is also suggested that deck openings exist every 25 feet in the pier deck to facilitate attack of a substructure fire by fire department equipment. Subdivision by fire walls and fire stops are also recommended, together with many other details of construction which will afford good fire protection.

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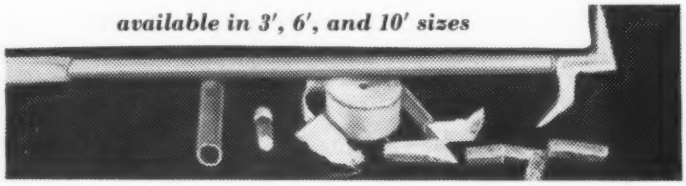

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WRITE TO: M. A. HALLIGAN, 1505 METROPOLITAN AVENUE, NEW YORK 62, N. Y.

The "Automatic" Run

SOMETHING of a record may have been established by the Lansing, Michigan, Fire Department. The death of one of that city's citizens recently ended a long series of unusual rescue calls. Harry D. Cove, 97, a retired lumber dealer, suffered from hardening of the arteries and attacks caused by the ailment rendered him unconscious. Members of the fire department responded to 172 calls to resuscitate him after the attacks. Eventually the dispatcher would only have to say "Harry Cove" on the radio, and the rescue run would be automatic.

On Chimney Fires

THE fire department in Forestville, New York, developed the form letter shown below and sent it to 549 rural boxholders within and beyond the fire protection district. Members of the department received only six calls to provide the chimney cleaning service but there was evidence that many home owners followed other suggestions of the letter. As stated by Fire Fighter Joe Bolivard of the Department, if one chimney fire was avoided because of the suggestions, then the nominal cost of preparing and mailing the letters was worthwhile.

ATTENTION WOODBURNERS!

Within the past years an estimated 25 percent of all fires were chimney fires. Fortunately most of the calls were answered by your fire department so that little or no damage resulted. We of the Forestville Fire Department are trying to eliminate 25 percent of the chimney fires before they start.

Burning wood will cause soot to cling to the inside of a chimney wall. This deposit will burn and often results in a chimney fire. The deposit should be removed at least once a year.

To help you protect your life and property, the Forestville Fire Department will come to your home and clean your chimney if you are unable to perform the task.

There is no charge for this service.

It is easier for us to help you to avoid fires than it is to extinguish them.

Protectingly yours,
The Forestville Fire Department

For this service call number 4321, or drop a post card to the Forestville Fire Department.

Provisional Chief in New York

CHIEF Edward Connors has been appointed provisionally as Chief of the New York City Fire Department. On October 1, he succeeded former Chief Peter Loftus, who was retired on that day. Salary for the position is $15,000 a year and competitive Civil Service examination will be held next year. Chief Connors will receive $12,500 during his interim appointment but will receive full salary after January 1, 1956. He has been a member of the department since 1918, and has risen through the ranks to his present office. Last winter Commissioner Edward J. Cavanagh, Jr., appointed him to head the newly-established Bureau of Personnel and Administration.

Full Circle

A PUBLICATION called "The Third Alarmer", issued by the Third Alarmer Association, Ridgewood, New Jersey, reports an interesting chain of events which occurred in New York City on August 1. As shown below, it describes a "nightmare" which could confront any large municipal fire department.

"It Had To Happen — Around 4:30 PM. on August 1st, a hot and humid day, the mercury was hitting about 95 degrees. Bronx Box No. 2707 at 169th Street and Webster Avenue came in. It was quickly followed by the report of 'All Hands' operating. The fire was in full possession of a two 3-story frame occupied tenements.

After a few minutes the 2nd alarm was requested by the Chief of the 7th Division. During the many progress reports in comes Bronx Box 2260 for a fire at Exterior Street between 151st and 157th Streets. The 5th Division responds with the 16th Battalion, two engines, and a truck. Also, Engine 78, the fireboat . . . The Deputy reports a tugboat fully involved and asks for a full 1st alarm assignment.

In the meantime, back at the 2nd alarm site, the 7th Division asks for the Ambulance as three firemen have been injured. Ambulance 1 reaches the Willis Avenue Bridge and lo and behold! It is raised to let a boat through. The boat? None other than Engine 78 the fireboat!

To make matters worse, due to the heat, the bridge gets stuck and it is some time before they can get it down. Ambulance 1 is pretty well hemmed in and just had to wait. Fortunately, the Medical Officer on duty got to the fire in another manner and the men were taken care of and taken to the hospital by another means. By this time the Deputy of the 5th calls in that the tugboat fire is under control and the boat is no longer needed."

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WASHERS • DRYERS • TURN-TABLES • STORAGE RACKS

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By use of the turn-tables the wet hose is kept off the floor; there is little if any of the usual mess incident to the practice of washing hose on the floor. These turn-tables are equally valuable for re-loading the hose truck — several lengths may be stacked on each — or for loading the hose dryer.

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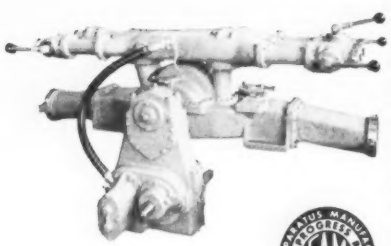

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WATEROUS Pumps today are found in most metropolitan cities and in thousands of smaller communities. They are in hundreds of defense installations and in many foreign countries.

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Fire Departments, England and Wales, 1954

FOR a good many years one of the awards for distinguished service to firemen in England and Wales has been the King's Police and Fire Service Medal. The report of Her Majesty's Chief Inspector of Fire Services, Mr. H. M. Smith, for the year 1954, among other things, mentions that in June 1954, Her Majesty The Queen approved the institution of a separate award to members of fire brigades to be known as the Queen's Fire Service Medal. This award is to take the place of the medal assigned for both fire and police department honors. While this item was reported as a routine detail of the annual report on fire departments in England and Wales, this action is a very significant one, marking a positive break in the long-held British public concept that somehow fire departments are tagged on to police departments.

Copies of the "Report of Her Majesty's Chief Inspector of Fire Services (Counties and County Boroughs, England and Wales) for the year 1954" (20 pages, August 1955) may be obtained from Her Majesty's Stationery Office for ninepence, or in the United States for 25 cents from the British Information Services, 30 Rockefeller Plaza, New York 20, N. Y. Fire departments in England and Wales are under the direction of large local authorities, such as the counties and county boroughs (cities). Since the reorganization of these local fire departments following the war, the central government furnishes part of the money for the local fire departments and the Chief Inspector administers these arrangements for the Home Office Fire Service Department. The Chief Inspector's report shows 135 local government fire brigades. They attended 75,900 fires, excluding chimney fires, and also answered a great many additional calls for special services. Emphasis of the fire services has been continued in fire prevention work, 180,757 fire prevention inspections having been made during 1954. Training activities are continued at a Fire Service College and other fire brigade schools.

Mr. Smith's report noted that during the year a House of Com-

mons' committee had a look at fire department costs, coming to the conclusion that it was difficult to see specific economies. They recommended, however, that a comprehensive review of the risk categories be undertaken and attention given to standards of fire cover. What is referred to as "fire cover" is the number and location of fire companies. These studies are to be carried out cooperatively between the Home Office Fire Service Department and the local fire department authorities.

New Chief in Spokane

FORMER Assistant Chief W. A. Dunham has been appointed to Chief of the Spokane, Washington, Fire Department. He succeeds former Chief James T. Blamey, who retired on September 1 after 45 years of service.

Chief Dunham has been a member of the Spokane Fire Department since 1927. He was promoted to lieutenant in 1938, to captain in 1941, then to assistant chief, in which position he has served for the past nine years. He is past president of the IAFF Local 29 and has served on numerous committees for the fire department. (*Bailey H. Reynolds Photo.*)

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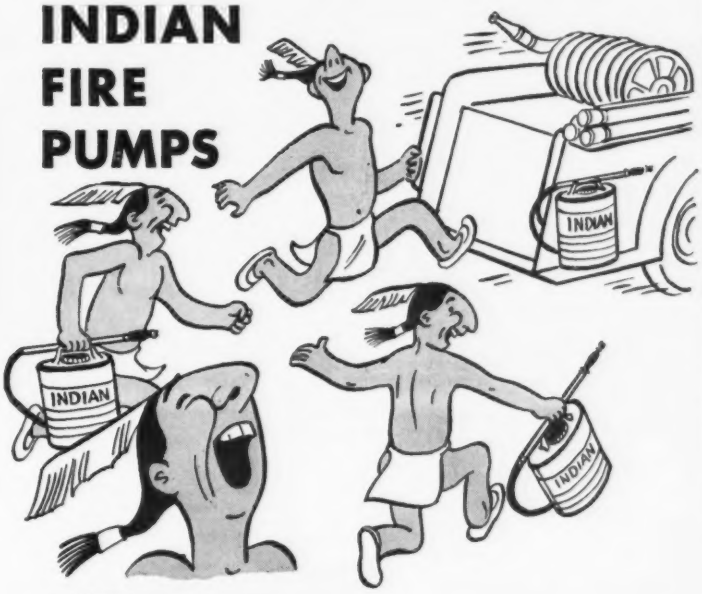

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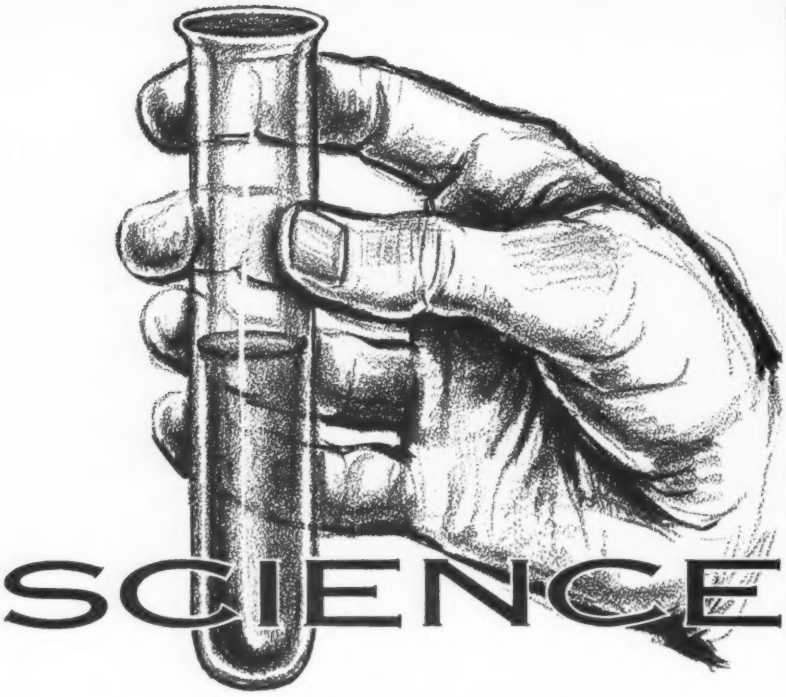

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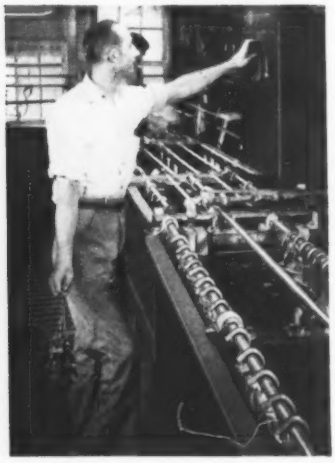

Plating worker adjusting electrically controlled master panel before putting badges into plating tank.

After careful cleaning and polishing your badge is ready for the first of *three* very important plating operations. *First* your badge is immersed in a scientifically controlled copper solution. *Second,* a heavy coating of Hot Nickel is applied for brightness and wear resistance. *Third,* if your badge is to be Gold Plated or Rhodium Plated these finishes are applied over Copper and Hot Nickel.

. . . This triple plating gives every BLACKINTON badge extra long life and assures you of that extra special BLACKINTON look.

. . . Ask to see BLACKINTON before you buy. Your equipment supplier has samples of BLACKINTON badges for your examination.

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V. H. BLACKINTON & CO., INC., ATTLEBORO FALLS, MASS.

BADGES AND UNIFORM INSIGNIA FOR EVERY SERVICE AND INDUSTRY.

Waiting for Water

An alert photographer of the New York *Daily News* got this unusual picture in an apartment house on September 6. It shows members of a truck company trying to squeeze by hosemen as fire breaks through the transom of the room. Note that the laddermen are careful to avoid the uncharged line.

"Sparky" in Haverhill, Mass.

During the past Fire Prevention Week, the Haverhill Fire Department made good use of "Sparky". Ladderman, David Malbon, dressed in the costume shown above appeared on television broadcasts and also participated in many of the activities sponsored especially for children. In a visit to the NFPA Executive office, Ladderman Malbon posed for this photo with (*left to right*) Haverhill Fire Chief, William B. Hunt; NFPA General Manager, Percy Bugbee; and Lt. Arnold F. Burrill, Head of the Fire Prevention Bureau, Haverhill Fire Department.

"The Probationary Fireman"

THE Chicago, Illinois, Fire Department, headed by Fire Commissioner Anthony J. Mullaney, uses an informative 8-page brochure, with the above title, for new firemen who must serve probation for their first six months of service.

This is an 8½ by 11-in. mimeographed publication which outlines the mental and physical qualifications for fire department duty; the team work and respect of discipline expected of each member of the department; and the need for alertness in the uniformed fire service. The brochure also mentions the opportunities for advancement and security; the need for conscientious public relation efforts for every member; and the rights and benefits which accrue to each member of the Chicago Fire Department.

The brochure was prepared by Division Marshal Pat Kelly, in charge of the Personnel, Plans & Training in the Department.

Correction Notice

IN THE August issue of FIREMEN Magazine, an article on the book "Fire Prevention Recommended Standards" stated that the price was "25 shillings plus sixpence postage" ($4.59). Readers are informed that the correct price of this book is 7 shillings sixpence plus sixpence ($1.35) plus sixpence (9 cents) postage. It may be obtained by writing to Ernest Benn Limited, Bouverie House, Fleet Street, London EC4, England.

Kidde Expands

WALTER KIDDE & COMPANY of Belleville, New Jersey, recently acquired J. H. Sharff, Inc., of Orange and Mohawk Electric Manufacturing Company of East Orange, New Jersey. Sharff manufactures and distributes fire detection equipment including a spot fire detection system called "Fyrindex," while Mohawk manufactures a diversified line of electrical equipment. Sales and distribution of the new subsidiary will be handled by Kidde's Industrial and Ultrasonic Division.

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Avail yourself of the many advantages of buying ALL your personal equipment, from head to foot, from one dependable source—from a firm that assumes responsibility for the quality of EVERY item, and that stands back of it with a reputation gained in serving firemen for more than a hundred years. . . . Here is a partial list of the equipment we can supply, promptly. Many other items are described in our Catalog, sent on request.

TURNOUT SUITS RUBBER COATS RUBBER BOOTS
RUBBER-LINED MITTENS ASBESTOS GLOVES
SAFETY BELTS TRAFFIC OFFICERS' BELTS CAPS, BADGES

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Write for Catalog 350

CAIRNS & BRO., Inc. - Allwood, Clifton, N. J.

SINCE 1836

Boston University Seminar for Fire Chiefs

MORE than sixty fire chiefs from Massachusetts, Rhode Island and Connecticut met at Boston University, Boston, Massachusetts, October 4-6, for a three-day seminar on fire administration. Purpose of the meeting was to obtain some suggestions for an extensive course in fire administration and related subjects which the University is planning to conduct in the near future.

The seminar was conducted by Prof. Lashley G. Harvey of the University's School of Public Administration. Featured speakers included: Chief Henry G. Thomas of Hartford, Connecticut, who discussed "The Duties of a Fire Chief"; Director Joseph S. Slavet of the Boston Municipal Research Bureau, whose topic was "Financing City Fire Service"; Warren Y. Kimball, Manager, NFPA Fire Service Department, who described "Procurement of Fire Apparatus"; Director Thomas J. Greehan, Division of Civil Service, Commonwealth of Massachusetts; Commissioner Francis X. Cotter and Assistant Fire Chief, Leo C. Driscoll, Boston Fire Department; Chief Lewis A. Marshall, Providence, Rhode Island, Fire Department; Lt. Daniel J. McLoud, representing the Boston Protective Department; Chief Thomas F. Gorman, Quincy, Massachusetts, Fire Department and Edward C. Monahan, Town Manager of Arlington, Massachusetts.

A special banquet, held on the evening of October 5th, featured addresses by Boston's Mayor, John B. Hynes; and Gordon Swan, Program Manager, WBZ TV of Boston, who described how that station promotes fire prevention on television.

In addition to individual speakers there were a numer of panel discussions of subjects pertinent to fire department administration. Many of the fire chiefs present gave constructive suggestions on what particular subjects should be stressed in the fire administration course, which is tentatively planned to begin in the Spring of 1956. A special committee is working with Professor Harvey to consolidate the suggestions of the seminar. In addition to a number of the speakers mentioned above, the committee also includes: Chief Albert W. Kimball, Hingham, Massachusetts, Fire Department and Secretary-Treasurer of Massachusetts Fire Chiefs; Chief James E. Callahan, Winchester, Massachusetts, Fire Department and President of that Chiefs' Association; and Assistant Chiefs Edward N. Montgomery and Patrick E. Collins of the Boston Fire Department.

Free Booklet on Aircraft

UNITED Air Lines has made a practical contribution in the interest of life safety by publishing an attractive, well-illustrated booklet titled "Aircraft Familiarization for Firemen and Crash Crews". Measuring 8¼ by 6 inches, the 24-page booklet contains diagrams and pictures of the "Mainliners" DC-3, DC-4, DC-6, and DC-7 types, the DC-6 Coach, and the "Mainliner" Convair.

Fire fighters will find some interesting information in the diagrams which show the location of passenger sections and indicate the number of passengers carried; locations of exits, fire extinguishers, fuel tanks, escape ropes and slides, and other important details. Each diagram is accompanied by an explanatory caption, which describes the fuel capacity of the plane and how entry can be made for rescue.

Copies of the booklet may be obtained free by writing to United Air Lines, Department of Safety, Stapleton Airfield, Denver, Colorado.

Nation's Fire Losses — 1954

FOR the first time in five years total annual fire loss for the United States showed a decrease during the year 1954. Publication of the annual study of fire losses and their classification in the October, 1955, NFPA *Quarterly*, presents the estimate that 1954 U. S. fire losses amounted to $1,016,915,000, a decrease of approximately 5 million dollars from the previous year's total.

These estimates are based upon the direct dollar loss resulting from 1,993,300 fires of all types which occurred in the United States last year. The NFPA study also totals and classifies various types of occupancies affected by fire, and reports major fire causes.

The complete study will be available to readers of FIREMEN as a separate reprint, priced at 25 cents per copy. Write to the NFPA Publications Department, 60 Batterymarch Street, Boston 10, Massachusetts, and ask for "Fires and Fire Losses Classified — 1954."

New Apparatus for Indianapolis

The Indianapolis, Indiana, Fire Department recently acquired three 1500 gpm pumpers from the Maxim Motor Company in Middleboro, Massachusetts. One of the new pumpers is shown above. They each feature a 275 H.P. engine, a Hale pump with six outlets, and individual gauges on each outlet. Note the compact panel board in the center of the vehicle.

PROTECTION

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Metcalf UNIFORM FABRICS

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Metcalf's P & F All-Wool, Stock-Dyed Blue Serge (#386) Is the Only Police and Fireman's Uniform Fabric in America... TESTED and CERTIFIED by United States Testing Co.!

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The United States Testing Co., one of America's oldest impartial testing laboratories, tests all Metcalf P & F Stock-Dyed Blue Serge (#386)... a continuous program of quality control.

As a result of this "third degree," Metcalf's 386 is the only police and fireman's uniform fabric in America approved and certified for:

- Color uniformity
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- Shrinkage to dry cleaning
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Tropical Weights: serges, 10-20 oz.; elastiques, 19 and 28 oz.

The METCALF Gold Seal on the back of fabric is your protection.

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Manayunk Mill Burns on an Island

Wide World Photo

United Press Photo

PHILADELPHIA fire fighters had plenty of water and sufficient hose lines but were unable to attack from a favorable position when fire destroyed this spinning mill in Manayunk, Pennsylvania, on September 8. The 3- to 5-story and basement stone building was one of four adjoining manufacturing occupancies, located on an island which could be reached only by a 12-ft. wide bridge across a 50-ft. wide canal. (*See photos.*)

Fire started under a carding machine on the fifth floor and some of the employees attacked the flames with hand extinguishers, while others evacuated the building. Apparently some time elapsed before the fire department was called. The building was equipped with sprinklers installed in 1880 but sprinkler coverage was not complete and the piping was in poor condition. As a result, fire spread beyond control through the fifth floor and had broken through the roof when first alarm apparatus responded.

Response to first alarm brought a 2-piece engine company, and a ladder company from a fire station three blocks away, as well as 3 more pumpers and a ladder truck from more distant stations. Second and third alarms brought total response to 17 pumpers, five ladder companies and rescue squad, and three special service trucks of the Philadelphia Fire Department. A total of thirty 2½-in. lines were placed into operation, in addition to five monitor nozzles.

Because of the poor vantage point for directing hose streams, fire fighters could make little progress in confining the blaze. Improper piling of stock in the interior resulted in blocked windows and lack of aisle space.

Initially fire fighters advanced lines into the third and fourth floors of one of the buildings but were forced to withdraw as fire spread rapidly through oil-soaked floors and the densely packed combustible stock. Fire doors had been closed by employees and helped to contain the fire for some time, but eventually two of the plant's buildings became completely involved and a third building was partially damaged. The intense heat of the fire caused sprinklers to operate in an exposed building situated across the 50-ft. canal.

Loss was estimated in the vicinity of $215,000.

New...

FALCON
Signal Horn
(EXPLOSION PROOF)

Listed for interior use in Schools, Institutions and public buildings as an approvable item by the Federal Civil Defense Administration for Federal matching funds.

The ideal warning device for industry and large buildings.

Long Range—Completely Portable—Long Life —Guaranteed

Patent pending

Write today for full details

Falcon Alarm Co. Inc.

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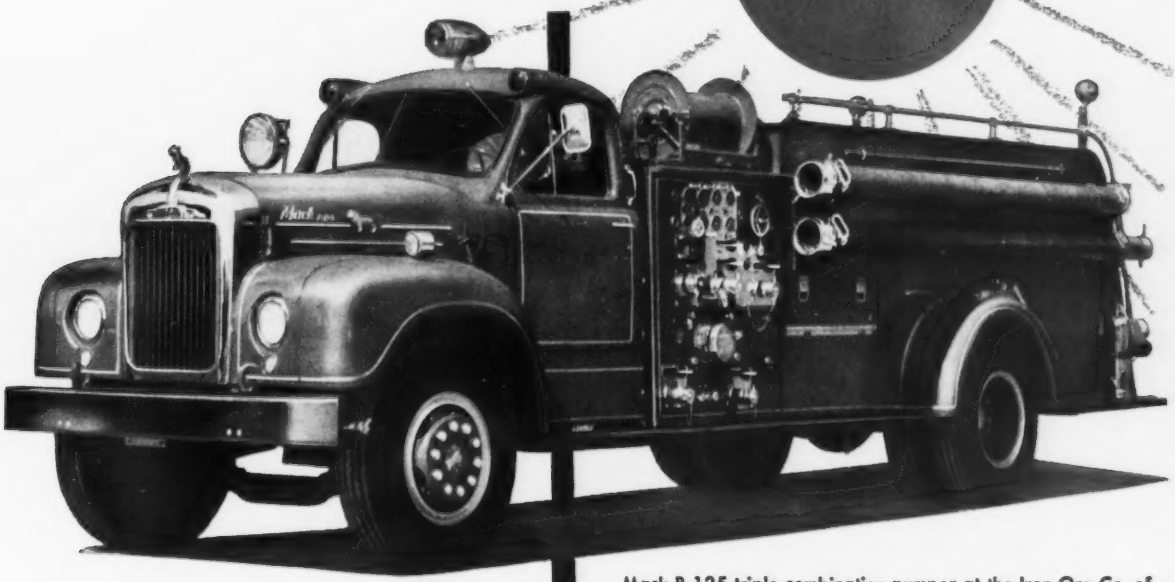
243 Broad Street, Summit, N. J.

in the land of the midnight sun



Mack B-125 triple combination pumper at the Iron Ore Co. of Canada operations, Schefferville, Quebec, northernmost incorporated town in Canada. Pumper is equipped with pump pans to retain heat.

Mack PUMPER PROTECTS HUGE IRON ORE MINE

Even under weather conditions that drop winter temperatures to 65 degrees below zero, this Mack triple combination pumper is relied upon for dependable operation whenever the need arises. It protects structures on the Iron Ore Company of Canada property in Northern Quebec far north of the timber line.

This pumper is literally a self-contained fire department in itself. In addition to a 900-gallon (U.S.) water tank, it is equipped with two hose reels each carrying 150′ of ¾″ hose, and 2000′ of 2½″ hose and 500′ of 1½″ hose in the body.

Built by Mack to live up to Mack's high performance standards, this 1250 gpm pumper, like every piece of Mack apparatus, is the product of the most complete manufacturing facilities in the industry—a product of complete control over the construction of all components. It is an example of the way Mack can meet any fire-fighting apparatus need.

To find out how "Built by Mack" can assure *you* of getting outstanding performance and long-lived dependability, contact your Mack representative or distributor today.

MACK MANUFACTURING CORPORATION

Empire State Building, New York 1, N. Y.

3579

TRIPLE COMBINATION PUMPERS—500 to 1250 GPM . . . SQUAD CARS AND HOSE WAGONS . . . 65′, 75′ and 85′ AERIALS . . . COMBINATION LADDER TRUCKS

MIDWESTERN

Safety Clothing for FIREMEN

The Original STRIPED SAFETY COAT

The striped safety coat for firemen is an *original* MIDWESTERN development . . . featuring highly visible yellow stripes which are *rubberized as part of the material* . . . not painted, glued or sewed on!

Service records prove that Midwestern Striped Safety Coats withstand years of rugged duty . . . offer high safety visibility during the entire life of the garment. There are many imitations but *no substitute* for the workmanship, built-in comfort and longer wear you receive by specifying MIDWESTERN.

MIDWESTERN LEADS IN QUALITY

Superior quality, advanced design, exclusive fabric materials and safety features have made Midwestern a leader in the field of firemen's safety clothing. For complete information on our full line, see your Midwestern dealer. A letter to the factory will also bring you literature and material samples for your inspection.

MIDWESTERN SAFETY MFG. CO. Mackinaw, Illinois
Manufacturers of the Famous **MACKINAW Safety Coats**

WATER when and where you want it!

with **HARODIKES**
Portable Canvas Water Tanks
THE ECONOMICAL AND EFFICIENT WAY TO CARRY AND STORE WATER.

ON THE JOB - ON THE SPOT
KEEPING AMERICA GREEN

EXCLUSIVE FEATURES

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- **Easily Back-packed**
- **Ideal for Relay Pumping**
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Available in 150 & 300 gallon sizes

A WATER SUPPLY AT THE SCENE OF THE FIRE

Write TODAY for Full Information and Price List
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NORTH DIGHTON, MASSACHUSETTS

NATIONAL FIRE PROTECTION ASSOCIATION
60 Batterymarch Street, Boston 10, Massachusetts

Please send me further information on NFPA Fire Department Membership.

Name .....

Address .....

City ..... State .....

New Members in NFPA

THE fire chiefs and fire departments listed below recently joined NFPA, bringing current Fire Department Membership to a total of 2,189 fire departments and 25,785 men. In addition, a number of fire officers and fire fighters retain individual associate memberships in the Association. Consequently, FIREMEN magazine is now being mailed regularly to nearly 30,000 readers each month. There is also a special "promotional" mailing to fire departments who do not have NFPA membership.

For this latter group we'd like to call attention to the special application form which is at lower left.

In order for the men in your fire department to receive FIREMEN you, as chief, or the department as a unit, must first enroll in NFPA. Dues are only $12.50 per year and your department will receive the NFPA *Quarterly*, *Fire News*, as well as subscriptions to FIREMEN.

NFPA Welcomes:

The following fire chiefs and fire departments who recently enrolled in the Association:

California: Azusa Fire Department, Azusa; Citrus Heights Fire Department, Citrus Heights; Clarksburg Fire District, Clarksburg.

Connecticut: Milford Fire Department, Milford.

Illinois: Hanover Fire Department, Hanover.

Iowa: Bode Volunteer Fire Department, Bode.

Maryland: Brandywine-Aquasco Vol. Fire Department, Inc., Brandywine.

Nebraska: Ainsworth Volunteer Fire Department, Ainsworth.

New Brunswick: Royal Canadian Air Force Station, Chatham.

New Jersey: Chief William H. Haldane, Ridgewood Fire Department, Ridgewood.

New York: Reserve Fire District No. 3, West Seneca.

Ohio: Chief William Melke, Kettering Fire Department, Kettering.

Pennsylvania: Kennett Fire Company No. 1, Kennett Square; Eastmont Volunteer Fire Department, Wilkins Township No. 4, Pittsburgh.

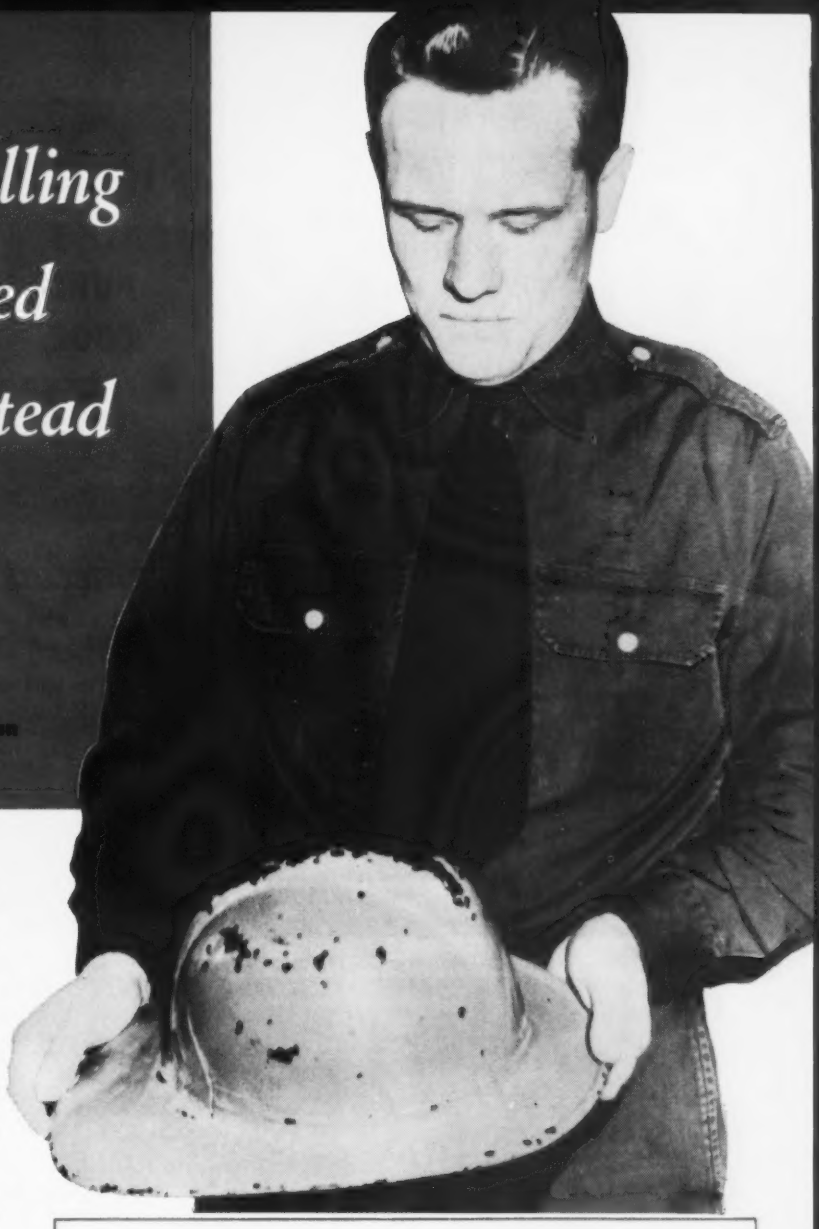
Quebec: Bryson Fire Department, Bryson.

Rhode Island: Fairlawn-Lincoln Fire Department, Saylesville.

Virginia: Charlotte Court House Volunteer Fire Company, Charlotte Court House; Davis Corner Volunteer Fire Department, Inc., Norfolk.

"What if that falling wall had bounced off my head instead of this M-S-A helmet!"

says Bernie Kush, Fireman
Omaha, Nebraska



Most firemen agree that it's best not to think of what could have happened *if* . . . but Bernie Kush of the Omaha, Nebraska, Fire Department rates a kind of special excuse if he wonders once in a while about his narrow escape.

It was a three-alarm fire, and things were happening fast. Fireman Kush was moving in with his hose, when he heard warning shouts from the chief. He looked up, and saw it coming . . . the entire wall was collapsing. He made a dash for cover, but it was too late. Bricks, rubble, debris crashed down. In seconds he was buried waist deep.

Fireman Kush commented later that he lost count of the number of times his helmet was hit by shattered wall-structure, but he did remember the one that struck hard enough to crack the plastic shell. It's easy to understand why Kush calls his helmet a "life saver."

MSA
SAFETY EQUIPMENT HEADQUARTERS

Call the M-S-A man on your every safety problem . . . his job is to help you

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201 North Braddock Avenue, Pittsburgh 8, Pa.
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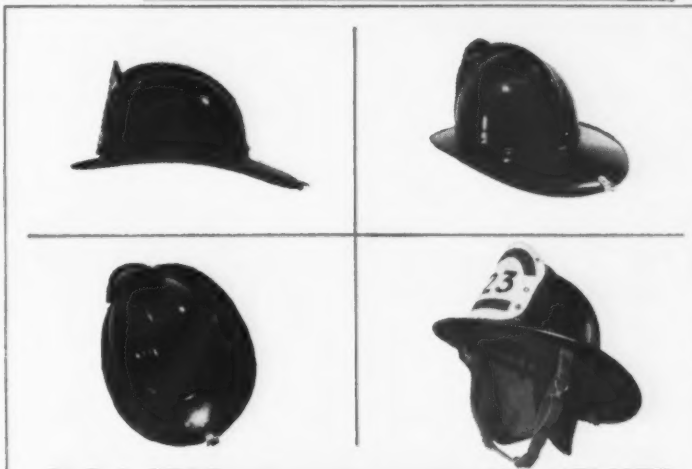

M-S-A STREAMLINED FIREMAN'S HELMET

Any way you look at it, the M-S-A Streamlined Fireman's Helmet has the appearance that firemen like. But that's only part of the story. This helmet provides double protection. The one-piece, high-pressure molded construction takes bumps and blows without passing them on. And its high dielectric strength protects against electrical hazards. It is made of laminated plastic, so it does not soften when exposed to water, moisture, or common chemicals, or warp with heat. Easily zipped-in winter liner assures all-weather comfort. Write for details.

Fire-fighting is Safer when you breathe PURE, COOL, COMPRESSED AIR

Cornelius
PORTABLE COMPRESSORS

Pure, cool air protects your firemen from danger. Compressed air is safer, easier to use in all atmospheres—even those where oxygen creates an added hazard. Cornelius compressors fill air tanks in minutes—allowing every man in your department to become familiar with demand breathing equipment.

Call your equipment distributor or write for FREE catalog describing five models of compressors and air purifier.

PRESSURES TO 3000 PSI

The only portable high pressure air compressor made expressly for fire departments. No installation required, plugs in any electric outlet.

NEW—Model 130R1500—lightest weight, lowest price and maximum performance are combined in this new compressor. Write for details.

THE CORNELIUS COMPANY
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Sensational... NEW!

360° REVOLVING LIGHT

TRIPPE HI-BALL

Picture this stunning light on your emergency car—whether it be FIRE, POLICE, AMBULANCE OR WRECKER. Flip the switch and instantly the parabolic mirror begins to rotate around the 100 candle power bulb at 60 times a minute. The flash is so intense not only at great distances but close by that all traffic is immediately alerted.

Yes, here is the ultimate in a warning light! Beautiful and distinctive, 9½" in diameter, stands 11 inches above the roof. Easily demountable.

WRITE TODAY FOR INTERESTING CATALOG

TRIPPE MANUFACTURING COMPANY
218 North Jefferson Street **Chicago 6, Illinois**

TWO CONTESTS!

An important distinction by NFPA General Manager Percy Bugbee

AT THE time of publication of this issue of FIREMEN magazine, many hundreds of communities throughout the United States and Canada are filing at NFPA headquarters in Boston their entries in the Fire Prevention Week Contest. A distinguished board of judges will be meeting at the NFPA office late in the year to pick the winners.

Entries in the NFPA Fire Prevention Week Contest come from various local groups that participate in Fire Prevention Week. In many cases fire departments handle the whole Fire Prevention Week observance and submit the entry. In other cases the entry comes from the local Chamber of Commerce or local Safety Council, and in some cases from local civic clubs, American Legion posts, and other civic agencies. In the NFPA contest now, in addition to United States and Canadian cities, contest entries are received from industry and from the Army, the Navy, and the Air Force. In the case of these latter four categories, the emphasis is not so much on Fire Prevention Week activities as on year-round activities in fire prevention conducted by the industry or by the military installation.

Year after year the Fire Prevention Week Contest grows larger. Last year more than 1,600 entries were received and it appears that this year will break all previous records in this competition.

There is occasionally still some confusion about the NFPA Fire Prevention Week Contest and the Inter-Chamber Fire Safety Contest (formerly Inter-Chamber National Fire Waste Contest) conducted by the United States Chamber of Commerce. In the latter contest the submitting agency is the local Chamber of Commerce in United States cities. In the NFPA Fire Prevention Week Contest, entries have to be received in Boston by December 1

In the Inter-Chamber Fire Safety Contest, entries must be filed with the United States Chamber of Commerce in Washington by March 15, 1956 for year-round activities on the part of the local Chamber of Commerce fire prevention committee for the previous calendar year of 1955. Awards in the NFPA Fire Prevention Week Contest are announced usually in January. Awards in the Inter-Chamber Fire Safety Contest conducted by the United States Chamber of Commerce are announced in April.

It is to the interest of any community that has a good fire prevention program to participate in both of these contests. The work done and the reports made for the NFPA Fire Prevention Week Contest form an important part of the exhibit that would be submitted by the local Chamber of Commerce in the National Fire Safety Contest. The timing of these two contests is such that any community can submit its entry in the NFPA Fire Prevention Week Contest, have it returned, and submit it with other appropriate data for entry in the Inter-Chamber Fire Safety Contest.

We hope that year after year more and more cities will participate in both contests.

Apparatus for Lease

FOUR Wheel Drive Auto Company of Clintonville, Wisconsin, has just announced an arrangement whereby fire departments may lease any type of that concern's fire fighting apparatus at a monthly rate for a five-year period.

At the end of that time, the fire department may purchase the equipment outright by paying 5 percent of the original cost; may continue to lease the unit at 3 percent a year; or may trade the equipment on new apparatus with a new lease agreement.

All sizes of the manufacturer's apparatus are available under the lease plan and any optional equipment desired may be included in the original lease price.

According to the manufacturer, an equipped pumper, meeting standard specifications, could be leased for as little as $225 a month. For further information write to the manufacturer.

POWHATAN

Leader Line Water Thief

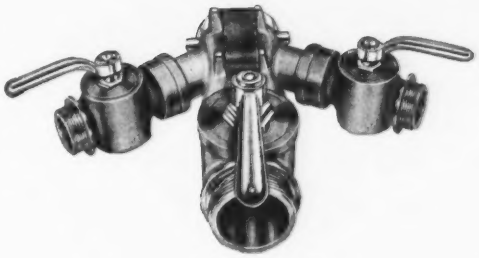


Plate 240

2½" quarter-turn valve on straight-way connection and 1½" quarter-turn valve on sensible lug swivel. Rough body, painted red, with polished bronze or chromium plated trim. Leather carrying strap.

Write for complete, new Catalog

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia
Established 1892

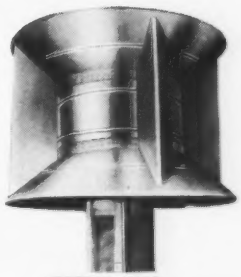
YOU re not *immune!*

During 1955 many sections of North America, never before visited by disaster, were ravaged by wind, water, hail, fire, explosion, and earthquake.

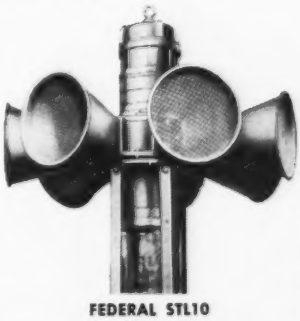
Don't be complacent.

You are *not* immune, but you need not be unprepared.

Winter, with doors and windows shut against the cold reduces the effect of a warning signal. FEDERAL can furnish larger and louder sirens. Is your present siren or alarm system adequate?



FEDERAL SD10
2-tone
Air Raid Siren



FEDERAL STL10
Fire Alarm Siren

A good warning system should do more than announce a fire; it should alert your entire population to take cover or evacuate; it can also summon civil defense, first aid, and emergency crews.

Avert panic, act with planning, and you reduce casualties.

Don't be a victim! Fire is not your only hazard! Complete your "Disaster Warning System" now! You may be living on borrowed time! Write today for information on FEDERAL Fire Alarm and Air Raid Sirens. We can help.

FEDERAL SIGN and SIGNAL Corporation
8717 S. State St., Chicago 19, Ill.

"I recommend BI-KLEEN for the FIRE HOUSE as well as FIRE HOSE!"

For cleaner, longer-lasting fire hose

This statement was made recently by a prominent fire chief because *Bi-Kleen* is not only the ideal cleaning and protection agent for all cotton rubber-lined hose, but it also does an amazingly fast and efficient job of cleaning oil, dirt and grease from the floor — even rough cement floors. Fire hose racks and truck beds need a good cleaning compound, too — and *Bi-Kleen* does a perfect job — keeps equipment "inspection clean" *all* the time with less scrubbing!

Order the inexpensive trial size today! You'll discover safe, non-toxic *Bi-Kleen* will save hose, save work, save money. Sold by the makers of the finest fire hose in the world — Bi-Lateral, flat-folding, non-creasing fire hose.

Bi-Lateral®

FIRE HOSE COMPANY

20 No. Wacker Drive
Chicago 6, Illinois

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News Items and New Equipment of Interest to the Fire Service

Bill Williams has been appointed manager of the fire equipment department of the *John Bean Division of Food Machinery and Chemical Corp.*, San Jose, Calif. . . . Joseph R. Ferland of *V. H. Blackinton & Co., Inc.*, manufacturers of fire badges and insignia, addressed a group of fire equipment suppliers attending the I.A.F.C. Convention in Omaha. . . . Are industrial plants in your community looking for in-plant fire apparatus? For list of suppliers write NFPA. . . . Pure, cool compressed air for your breathing apparatus is available in minutes with a Cornelius portable air compressor. For details on the new lightweight, low cost model, write *The Cornelius Co.*, 550 39th Avenue N.E., Minneapolis 21, Minn. . . . Are you prepared for tank truck fires? Rockwood double-strength Foam Liquid and Rockwood Wet are helpful in extinguishment. Get full data from *Rockwood Sprinkler Co.*, 1005 Harlow St., Worcester 5, Mass.

For quick entry in crashes and wrecks, try the "Halligan Tool." Write direct to *M. A. Halligan*, 1505 Metropolitan Ave., New York 62, N. Y. . . . Latest useful training device is "Visualcast" which projects and magnifies simple steps in fire service training by means of step-by-step sequences on a single slide. Write to *Robert J. Brady Co.*, 3255 M St., Washington 7, D. C. . . . Exciting night clothes for real and would-be firemen are the red cotton flannelette pajamas, night shirt and hat — called "Fire Alarm Clothes" — offered by *James Campion, Inc.*, Hanover, New Hampshire. . . . The new "Roto-Jet" fire hose washer will quickly wash, rinse and drain your fire hose. Get complete details from *Circul-Air Corp.*, 575 E. Milwaukee St., Detroit 2, Mich.

For easier drafting from ponds and streams, consider the "Float-Dock" dual use strainer made by *Fol-Da-Tank Co.*, Box 361, Rock Island, Illinois. . . . Rescue-emergency apparatus is a specialty of *The Gerstenslager Co.*, Wooster, Ohio. . . . Planning to dispose of apparatus or other equipment? Advertise it in FIREMEN. Write for ad rates . . . A U.L. labelled detector that screams out a 10-minute warning is the new alarm device made by *Falcon Alarm Co., Inc.*, 243 Broad St., Summit, N. J. . . . A 28-page booklet containing valuable information on uses for loudspeakers is yours free. Write to *University Loudspeakers, Inc.*, Desk 10, 80 So. Kensico Ave., White Plains, N. Y . . . A fire fighting broom made with steel bristles and detachable handle for small-space storage is "The King." Write to *Fire and Police Mfg. Corp.*, 24-20 Bridge Plaza South, L. I. City 1, N. Y.

"Revolvo-Ray," complete circle flashing light and the "Atomic" Rocket siren can be useful additions to your new and reconditioned apparatus and cars. Write today to *The Sireno Co., Inc.*, Dept. 40, 214 William St., New York 38, N. Y. . . . To preserve the memory of those who served with you and for special service awards, beautiful memorial plaques are the specialty at *City Pattern Shop, Inc.*, New Court St., Eastwood Station, Syracuse, N. Y. . . . For the latest in 360° revolving warning lights on all your vehicles, read the interesting catalog offered by *Trippe Mfg. Co.*, 218 North Jefferson St., Chicago 6, Illinois. . . . Get ready now to carry and store water supplies at out-of-the-way locations. Write for full information and prices on Harodikes portable canvas water tanks to *Harodikes, Inc.*, North Dighton, Mass. . . . Popular gifts for fire fighters are the new "Bronze Firemen" helmet table and desk lamps by *Norrington Co.*, Rehoboth, Mass. . . . Need high powered hand lights? Ask your dealer or write direct to *Carpenter Mfg. Co.*, Boston 45, Somerville, Mass. . . . A gift "he'll be proud to wear" is the chrome plated tie clip shaped in the pattern of a fire axe. Order direct from *Ray Klemm*, 1032 Malzahn St., Saginaw, Michigan.

A free folder on "Big Beam" emergency lights may be obtained by writing to *U-C Lite Manufacturing Company*, 1050 West Hubbard Street, Chicago 22, Illinois . . . **Correct address** of *Industrial Radio Corporation*, mentioned in "What's New" page of October FIREMEN, is 428 N. Parkside Avenue, Chicago 44, Illinois.

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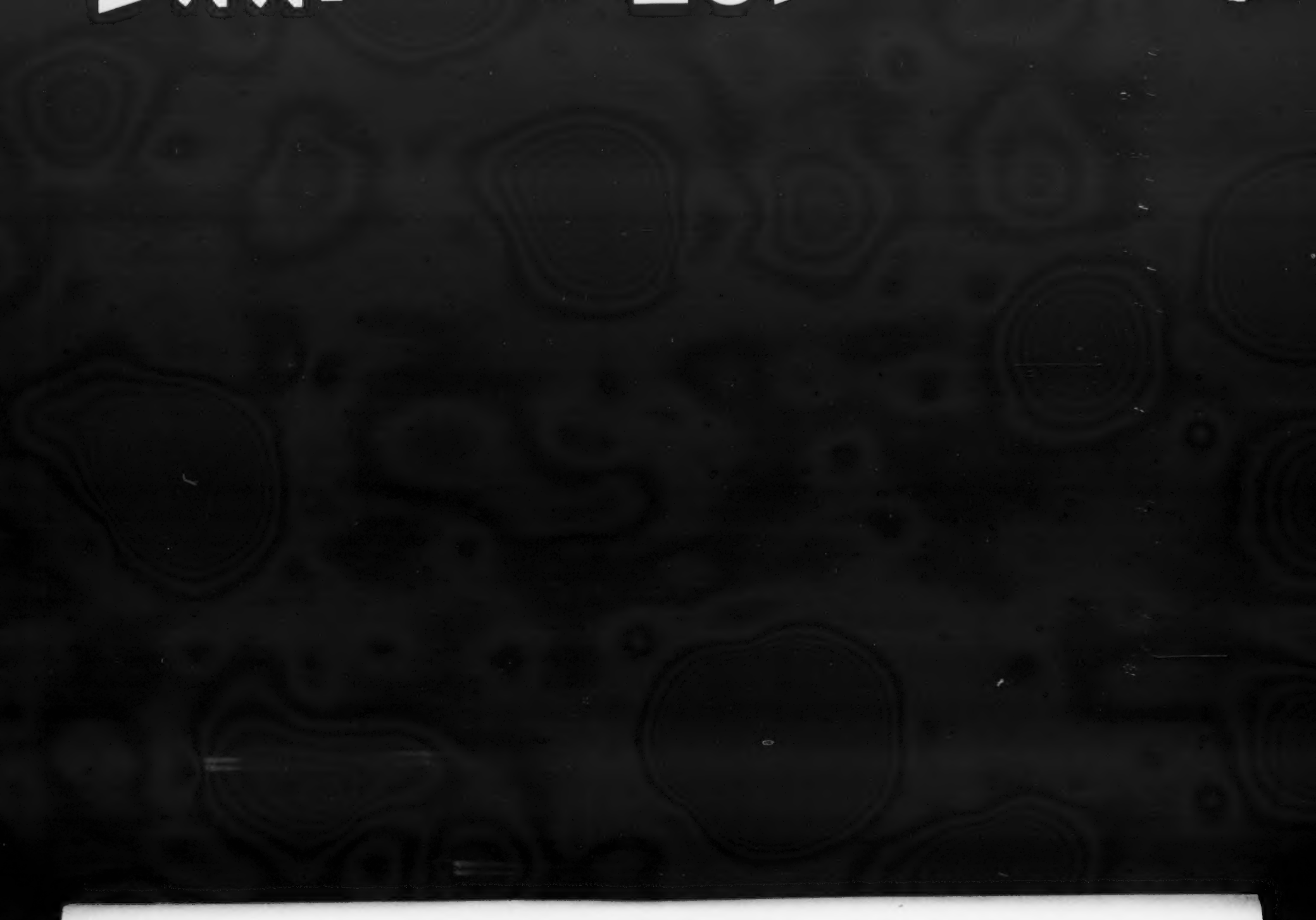
Sample Terms

Cellar Fire. Fire involving portions of a structure below grade and considered especially dangerous and difficult to fight because of confined heat and smoke, oxygen deficiency, tendency of fire to move upward through unprotected openings, physical punishment involved in moving downward against fire, and difficulty of achieving ventilation. Self-contained breathing apparatus should be used for personnel protection at basement or cellar fires.

Dog Robber. Aide to captain on detail or investigation.

Fire Tower. A self-contained structural stair tower used as a fire escape for building occupants and as a means of access for fighting structural fires. Frequently containing a fire department standpipe riser. Also, less frequently, a fire department training tower. A fire department communications center. Occasionally, a fire department water tower truck or an aerial ladder employed as a water tower.

Phase 3, or Third Phase. Dangerous smoldering period of an interior fire when oxygen content of atmosphere has been depleted below 15% presenting likelihood of back draft or explosion of confined heated smoke and gases if fire breaks through to outside or if building is carelessly ventilated.